

C2
Cont.
23
from the circuit substrat , and comprising:

a mating portion for engaging a contact on a mating component; and

a mounting portion for securing the connector to a substrate; and

a plurality of solder masses, each secured to a respective one of said mounting portions of said plurality of contacts.

41. (Once Amended) The electrical connector as recited in claim 1, wherein the [signal] contacts are one of blade-type and [dual] beam-type contacts.

REMARKS

The Office action rejected claims under 35 U.S.C. §§ 103 and 112. Applicants amended claims 1, 14, 18 and 41. Claims 1, 2, 4-20 and 22-41 remain. Applicants request that the Examiner reconsider and withdraw the rejections. A Petition for a two month extension of time accompanies this Reply as a separate paper.

Personal Interview

On 04 November 1999, the undersigned and the Examiner met to discuss the invention and the cited references, particularly with reference to claims 1 and 18. The undersigned brought a sample of the invention. No agreement was reached.

Specification

The Office action requested the addition of "solder balls" to the title. Applicants modified the title to include "solder masses." The term "solder masses" more closely conforms the title to the independent claims than with the use of the term "solder balls."

The Office action also requested that Applicants update the patent application serial

numbers appearing on page 1 of the specification. Applicants did not modify page 1 since the status of the applications has not changed.

Claim Rejections - 35 U.S.C. § 112

The Office action rejected claims 32-40 for allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skill in the relevant art that the inventors had possession of the claimed invention. Specifically, the Office action states that the term "fused" lacks even inherent basis in the disclosure. Applicants respectfully disagree.

Applicants believe that one of ordinary skill in the art of ball grid array technology would recognize that solder balls are fused to the conductive element. In support thereof, Applicants provide, as Exhibit "A," a definition of the term solder balls from a book entitled "Ball Grid Array Technology." As the definition confirms, a solder ball is a small sphere of solder secured to a conductive surface "generally after wave or reflow soldering." Clearly, therefore, the specification provides sufficient disclosure to one of skill in the art. Applicants request that the Examiner reconsider and withdraw the rejection.

Claim Rejections - 35 U.S.C. § 103(a)

The Office action rejected claims 1-41¹ as being unpatentable over any of Fedder, Kandybowski, Feldman or Korsunsky in view of Noschese, Swamy, Romine, Teka, Lin, Seidler and Electronics. The Office action also rejected claims 18-31² as being unpatentable over Noschese in view of Fedder, Lin, Feldman and Swamy. Finally, the

¹ Claims 3 and 21 were cancelled in a previous amendment.

² Claim 21 was cancelled in a prior amendment.

Office action rejected claims 1-41³ as being unpatentable over Romine in view of Fedder, F Idman, Noschese, Seidl r, Electronics, Teka, Lin and Swamy.

With specific reference to the use of multiple references (e.g. ten) in a rejection, Applicants direct the Examiner to M.P.E.P. § 707.07(g).

Applicants believe that each rejection is improper and must be withdrawn.

Applicants assert that the Office action has failed to establish a *prima facie* case of obviousness. One element of a *prima facie* case of obviousness requires that a motivation exist, in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine references.

The Examiner apparently believes that the mere fact that references could be combined renders the resultant combination obvious. However, it has been consistently held that examiners must rely upon the references, or knowledge generally available to one of ordinary skill in the art, to provide a motivation. See M.P.E.P. § 2143.01. An examiner cannot rely upon an applicant's own disclosure for the motivation. Since the Examiner has failed to express a motivation for the combination of the references, the rejections are improper and must be withdrawn.

Applicants modified claims 1, 14, 18 and 41 to highlight various features of the present invention. The cited references fail to disclose or to suggest such a combination of features. Applicants did not introduce new matter.

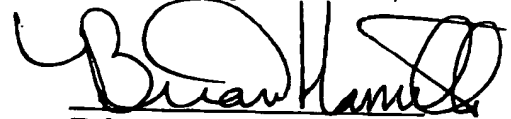
Conclusion

In light of the foregoing, Applicant submits that the claims are now in condition for allowance or in better form for appeal. The amendments do not raise the issue of new

³ Claims 3 and 21 were cancelled in a previous amendment.

matter, nor present new issues requiring additional consideration or search. Applicant requests that the Examiner reconsider and withdraw the rejections, and indicate the allowance of claims 1, 2, 4-20 and 22-41 at an early date.

Respectfully submitted,

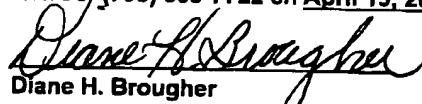
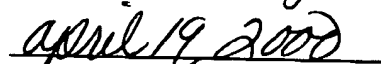


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